

two and two together. The fish in that case are also washed in strong brine, the heaps are frequently changed, and the fish are pressed.

The principal difference between the Shetland and the Norwegian method of drying is this: That in the Shetland Islands the fish are not pressed so much. The fish which are called well dried, are, however, according to my idea, moist and contain too much salt. Those fish are called first-class which, when held against the light or the sun, shine, and which on the flesh side have a fine white crust of salt. In Norway such fish would be considered salted too much. The Shetland fishermen do not use more salt than we do; but, as the fish are pressed less, more salt remains in them in proportion to the water and the solid parts than is the case in our method of drying. With us some of the water is pressed out, and thereby also a corresponding quantity of salt, and the superfluous water is removed more by evaporation, while in the Shetland Islands the drying is done by having a current of air strike the fish on both sides.

While the fish are lying in heaps waiting to be shipped they are covered with mats and sails. The packing-sheds are constructed partly of stone and partly of wood. If they are frame, the sides, both inside and outside, are covered with boards.

Besides cod, ling, and bream, coal-fish are also cured as klip-fish. The refuse is packed in barrels, and either sent to Scotland or to the various guano factories on the Shetland Islands.

The principal markets for the Shetland fish are Spain, Ireland, and Scotland. Well-dried fish also find a market in London. A considerable amount of well-dried fish, not too strongly salted, is put up in tin cans, packed in wooden boxes, and shipped to Australia.

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#### 106.—POUND AND NET FISHING AT ERIE, PA.

By M. E. DUNLAP.

Two methods of fishing are practiced at this place. About 200 miles of gill-nets are fished from this port. Eight pound-nets have been fished about 10 miles west of the entrance to our harbor. Over 100 tons of dead fish from the gill-nets have been thrown away annually, most of them back into the lake where they were caught, thus fouling the whitefish grounds. The gill-nets are fished all the year when the ice does not prevent. The pound-nets are set only three months in the year, and all of the fish taken in them are alive and fresh and without spawn, and all of them of full marketable size, none of them having to be thrown away on account of size or because of their being stale. Which of the two methods is best: (1) for the protection of the fish and the continuance of the supply; (2) for furnishing good, sound fish

to the consumer; (3) which is the most destructive; (4) which is most calculated to exhaust the supply?

There are only about 2 miles of frontage here where pound-nets can be set, on account of the form of the lake bottom. Just along here for the 2 miles it is a sand and mud bottom, and the only place where pound stakes can be driven. The rest of the shore from here to Silver Creek, in New York, and from here to Fairport, in Ohio, is rocky bottom, and pound-nets cannot be set. Thus we have a rocky shore for a distance of almost 200 miles, with only a small space of sand and mud at this place.

ERIE, PA., *March 27, 1885.*

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**107.—RESTOCKING THE MERRIMAC RIVER WITH LAMPREY EELS.**

**By GEORGE W. RIDDLE.**

[Letter to Prof. S. F. Baird.]

Amoskeag Falls on the Merrimac River was once the great fishing-place of New Hampshire. It was here Passacaway and his tribe of Indians lived and had their noted fishing-place, more than one hundred and twenty-five years ago; the waters teemed with salmon, shad, and lamprey eels. About forty years ago a high dam was built on the Merrimac River at Lawrence, Mass., 40 miles below here and some 25 miles from the mouth of the Merrimac River, which enters the Atlantic Ocean at Newburyport, Mass.

Since the building of the Lawrence dam (30 feet in height) fish and eels have become extinct, as they could not reach the spawning beds. Fishways have been built ten years or more, but no eels and but few salmon have come up the river. Four years ago I took from the Lawrence fishway some 200 lampreys, placed them in barrels, and transported them by rail above Amoskeag Falls. The result is that this year thousands of full-grown eels have put in an appearance and have gone up through the fishway.

They have ascended the river to the hatching house at Plymouth, 150 miles from the mouth of the river. Thousands of them have been seen at Amoskeag Falls in this city on their way to the spawning bed. As they have once more reached their spawning beds, I have no doubt that the return is a permanent one.

It is a great satisfaction to the fish commissioners to know that they have succeeded in restocking this river (which turns more machinery than any other river in the world, it is said) with lamprey eels, and it gives our people much encouragement to go on in the great work of restocking the large water-area of this state.

MANCHESTER, N. H., *June 19, 1885.*